5th Grade Digital Literacy & AI Course Syllabus
One Year for Elementary School, 25 Hours

Course Overview and Goals

The **Digital Literacy & AI Course** introduces students to essential digital skills and foundational computer science concepts needed to thrive in today's technology-driven world. Throughout the course, students build problem-solving skills and responsible technology practices while engaging in hands-on activities and real-world applications. They will develop an understanding of artificial intelligence, digital tools, online safety, and emerging technologies, building a strong foundation in digital literacy. This flexible course can be taught in any order to meet the needs of diverse classrooms.

Learning Environment: This course is designed to be teacher-led, with ready-to-use lesson plans that follow a structured format: **Introduction, Guided Practice, Independent Practice, Extension, and Reflection**. Lessons are built with spiral review to reinforce key concepts and culminate in engaging projects to showcase student understanding.

The lessons are delivered in an **"I do, we do, you do"** format, ensuring a gradual release of responsibility and fostering confidence in students as they learn. Teachers can adapt the content to fit their schedule and instructional needs. The concepts taught in this course spiral across grade levels, ensuring that students can revisit and build upon their understanding year after year, even if all lessons are not completed within a single year. The course includes a total of **25 lessons**, each approximately 45 minutes long.

Programming Environment: Students will write and run programs that are saved in students' accounts. The environment supports interactive, hands-on programming, enabling students to create and debug projects in a user-friendly interface.

Prerequisites: There are no prerequisites for this course. It is designed to support all learners, regardless of prior computer science experience.

More Information: Browse the content of this course at https://codehs.com/course/28008/explore

A clickable PDF can be found at https://codehs.com/DigLit_Roadmap

Course Breakdown

Unit 1: Getting Started (2 lessons)

In this module, students learn to log in and navigate the CodeHop Playground and are introduced to basic programming concepts to create interactive scenes with characters.

Objectives / Topics Covered	● Log in and navigate the CodeHop Playground independently. ● Explore the programming interface to create a simple programmed scene with characters.
Lessons	**Welcome to CodeHop!** ● Learn how to log in and use the CodeHop Playground. This short introductory lesson can be used on its own or right before a full lesson. **Introduction to Computer Science** ● Define important computer science vocabulary and create a simple program.

Unit 2: Computing & Society (7 lessons)

In this module, students examine how technological innovation shapes culture and communities, explore careers in mobile app development, and strengthen digital responsibility skills, including screen-time balance, digital etiquette, online reputation management, and reporting cyberbullying.

Objectives / Topics Covered	● Explain how technology influences culture and communities. ● Modify code to improve a mobile app or game. ● Create a healthy screen-time plan supported by evidence. ● Demonstrate proper digital etiquette and teamwork. ● Define and maintain a positive digital footprint. ● Explain how to report cyberbullying and practice digital responsibility.
Lessons	**Impacts of Computing: Innovation** ● Explain how technology and culture influence each other and create a project that compares past and present versions of a technology, explains its cultural impacts, and predicts how emerging technologies may affect different communities. **Careers in CS: Mobile Apps** ● Analyze and improve a game by modifying code and adding new functionality. **Screen Time: Academics and Evidence** ● Students will be able to explain how screen time affects their learning and study habits, create a healthy screen-time plan, and write an opinion about the most important screen-time rule and support it with reasons. **Digital Etiquette and Teamwork** ● Explain digital etiquette and demonstrate proper digital etiquette appropriate to the medium **Digital Reputation and Identity** ● Define digital footprint while cultivating and maintaining a positive online presence. **Reporting Cyberbullying** ● Identify and explain how to report cyberbullying. **Digital Responsibility: Owning Your Choices** ● Demonstrate digital responsibilities.

Unit 3: Research & Attribution (2 lessons)

In this module, students practice effective online research strategies, properly attribute sources, and complete a project researching a computer science innovator to create an informational program.

Objectives / Topics Covered	- Search for information effectively online. - Provide proper attribution to sources. - Research a CS innovator and identify key facts. - Create a program to present research findings.
Lessons	**Use and Search the Right Way** - Search for information to answer questions online and provide proper attribution to sources. **CS Innovators Research Project (2 classes)** - Research an innovator and abstract facts from an article to use as an informational program.

Unit 4: Systems & Security (5 lessons)

In this module, students explore how networks and protocols enable communication, practice troubleshooting computing systems, investigate cybersecurity and privacy concepts, examine relevant policies and laws, and apply basic cryptography skills to solve coded challenges.

Objectives / Topics Covered	- Explain how network protocols transfer data. - Identify computing system components and basic issues. - Demonstrate solutions to cybersecurity challenges. - Describe cybersecurity policies and laws. - Solve simple cryptography problems.
Lessons	**Networks and Protocols** - Explain how network protocols enable data transfer and compare WiFi, wired, and cellular networks. **Practicing with Computing Systems** - Identify parts of the computing system and identify simple hardware and software problems. **Cybersecurity & Privacy (2 classes)** - Create a program to demonstrate how to solve a real-world cybersecurity issue. **Cybersecurity Policies and Laws** - Explain policies and how they relate to their classroom or school, and they will research and explain a cybersecurity law specific to their state. **Scout's Cryptography Escape Room** - Learn basic cryptography and solve multiple ciphers.

Unit 5: Productivity Tools (2 lessons)

In this module, students use productivity software to create a persuasive project and collaborate digitally with others to improve a program.

Objectives / Topics Covered	- Use documents, spreadsheets, and presentations to persuade an audience. - Organize information clearly and effectively. - Collaborate digitally to improve a program.
Lessons	**Persuasive Productivity Software Project (2 classes)** - Use word processing, spreadsheet, and presentation software to organize and present information to persuade an audience. **Collaborating Globally (2 classes)** - Collaborate with others digitally to improve a program.

Unit 6: Data & Analysis (2 lessons)

In this module, students follow the inquiry process to investigate data, modify a program to display results using a line graph, and explore how digital data is stored and managed.

Objectives / Topics Covered	● Follow the inquiry process to investigate data. ● Modify a program to display results with a line graph. ● Explain how digital data is stored and where it can be saved.
Lessons	**Inquiry Project: Line Graph (2 classes)** ● Follow the inquiry process and modify a program to display the results of their investigation. **File Management and Data Exploration** ● Explain that different types of digital data take up different amounts of space and identify where digital data can be stored.

Unit 7: Artificial Intelligence (3 lessons)

In this module, students analyze how training data affects AI model outputs, evaluate the benefits and challenges of AI products, and apply design thinking to train and refine an AI chatbot.

Objectives / Topics Covered	● Analyze how training data impacts AI predictions. ● Evaluate the benefits and challenges of AI products. ● Train and improve an AI chatbot.
Lessons	**Machine Learning: Analyzing (2 classes)** ● Analyze relationships between the properties of training data and an AI model's output. **AI Products: Ethical and Responsible Choices** ● Describe how AI products work and analyze the benefits and challenges of various AI products from multiple perspectives. **Design Thinking: AI Chatbots (2 classes)** ● Describe how AI representations support reasoning and answer questions by training an AI chatbot program.

4th - 5th Grade Course Supplemental Materials

Resources	Description
Parent Welcome Letter (Spanish)	Send this letter home to introduce families to their new computer science curriculum.
Warm-Up Activities	This warm-up activity slide deck provides 5-10 minute problems aligned with computer science skills to engage students at the start of class, allowing teachers to preview or review concepts with answer keys and discussion tips included in the Speaker Notes.
Program Self-Assessment (Spanish)	This is a student self-assessment tool designed to help K-6 learners reflect on their programming projects, evaluate their skills in algorithms, debugging, collaboration, and reflection, and set goals for improvement.
Peer Review Resources (Spanish)	This provides structured worksheets to facilitate student feedback during collaborative coding projects. It encourages reflection by guiding students to highlight successes, ask questions, and offer constructive feedback on their partner's work.

[Lesson Reflection & Computational Thinking](#) ([Spanish](#))	This guides students in engaging with computational thinking concepts, preparing for discussions, reflecting on lessons, and applying their learning to real-world problem-solving.
[Design-Your-Own-Lesson Templates](#)	Empower your students to explore and express their knowledge creatively with our versatile graphic organizer templates. Designed with adaptability and ease of use in mind, these interactive tools transform any subject into an engaging, hands-on learning experience.
These resources and more are found on the **CodeHop Resources Page**.	